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FIELD SAMPLING PLAN
FOR
SPECTRUM FINISHING CORPORATION SITE
WEST BABYLON, SUFFOLK COUNTY, NEW YORK

EPA WORK ASSIGNMENT NUMBER: 022-2JZZ
EPA CONTRACT NUMBER: 68-W9-0022
ROY F. WESTON, INC.

Work Order No. 04200-022-081-0132

March 1998

WESTON/ARCS - Reviewed and Approved

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SECTION 1.0

INTRODUCTION

Presented herein is the field sampling plan for all sampling activities to be conducted by Roy F. Weston, Inc. (WESTON) at the Spectrum Finishing Corporation site located in West Babylon, New York. The field sampling plan has been developed at the request of the United States Environmental Protection Agency (U.S. EPA) in accordance with the Scope of Work and Appendices A through T (January 1991) and the U.S. EPA Region II Quality Assurance Manual (October 1989). In addition, this field sampling plan is consistent with the WESTON Generic Field Sampling Plan (dated December 1992). The field sampling plan is intended to be utilized in conjunction with the Spectrum Finishing Corporation Task Work Plan (TWP) and will accompany the TWP as Attachment 4.

The sampling strategy listed within the sampling plan emphasizes the collection of samples required to evaluate certain migration pathways of concern to the CERCLA Program. The sampling plan includes these sections: Sample Management and Control (2.0), Sampling Strategy and Procedures (3.0), Quality Assurance/Quality Control (QA/QC) (4.0), and Field Changes and Corrective Actions (5.0).

1.1 SITE DESCRIPTION

The Spectrum Finishing Corporation (SFC) site, [Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) ID No. NYD044466910], is a former electroplating facility located at 50 Dale Street, in West Babylon, Suffolk County, New York. Figure 1 presents a Site Location Map. The SFC site is located in suburban Long Island, where land surrounding the area is used predominately for commercial and manufacturing operations. The site is approximately 0.5 acre in size. It is bounded by Cabot Street to the west, by Dale Street to the east, and by commercial and manufacturing properties to the north and south. Several large cemeteries are located within 0.5 mile to the north, south, and west of the site. Figure 2 presents a Site Map.

The site is currently owned by Joseph Vazzana. The facility operated from 1968 to sometime in 1993. According to the New York State Department of Environmental Conservation (NYSDEC), SFC filed for bankruptcy in 1993. NYSDEC tried to get a judge to allow SFC assets to be used for an environmental cleanup/removal. According to NYSDEC, the judge ruled that SFC did not have enough assets for the cleanup. According to the U.S. EPA, a door manufacturer is using a portion of the facility (the former office area) for offices. It is not known if there are any full time workers on-site on a consistent basis.

SFC received a permit to operate a wastewater system from the Suffolk County Department of Health (SCDOH) on 27 June 1968. Manufacturing operations included copper, cadmium, and nickel electroplating; chromium conversion coating; and descaling of titanium alloys. The chemicals used to process the products included caustic soda, sulfuric acid, cyanide, chlorine, sodium meta-bisulfite, copper, cadmium, chromium, nickel, zinc, toluene, methylethylketone, and various solvents. The SFC site consisted of a 17,000-square-foot building that housed the electroplating operations, an area for treatment and holding of rinsewater, and offices. Numerous storage tanks and vats were located inside the building, which contained two sumps with concrete bottoms, each approximately 4 feet by 4 feet by 5 feet deep. Outside the building, storm drains in the parking lot located north of the building flowed into concrete "dry wells" that drained directly to the ground. Aboveground storage tanks and a drum storage area were also located outside the building while the facility was operational, but their locations could not be determined from available site files.

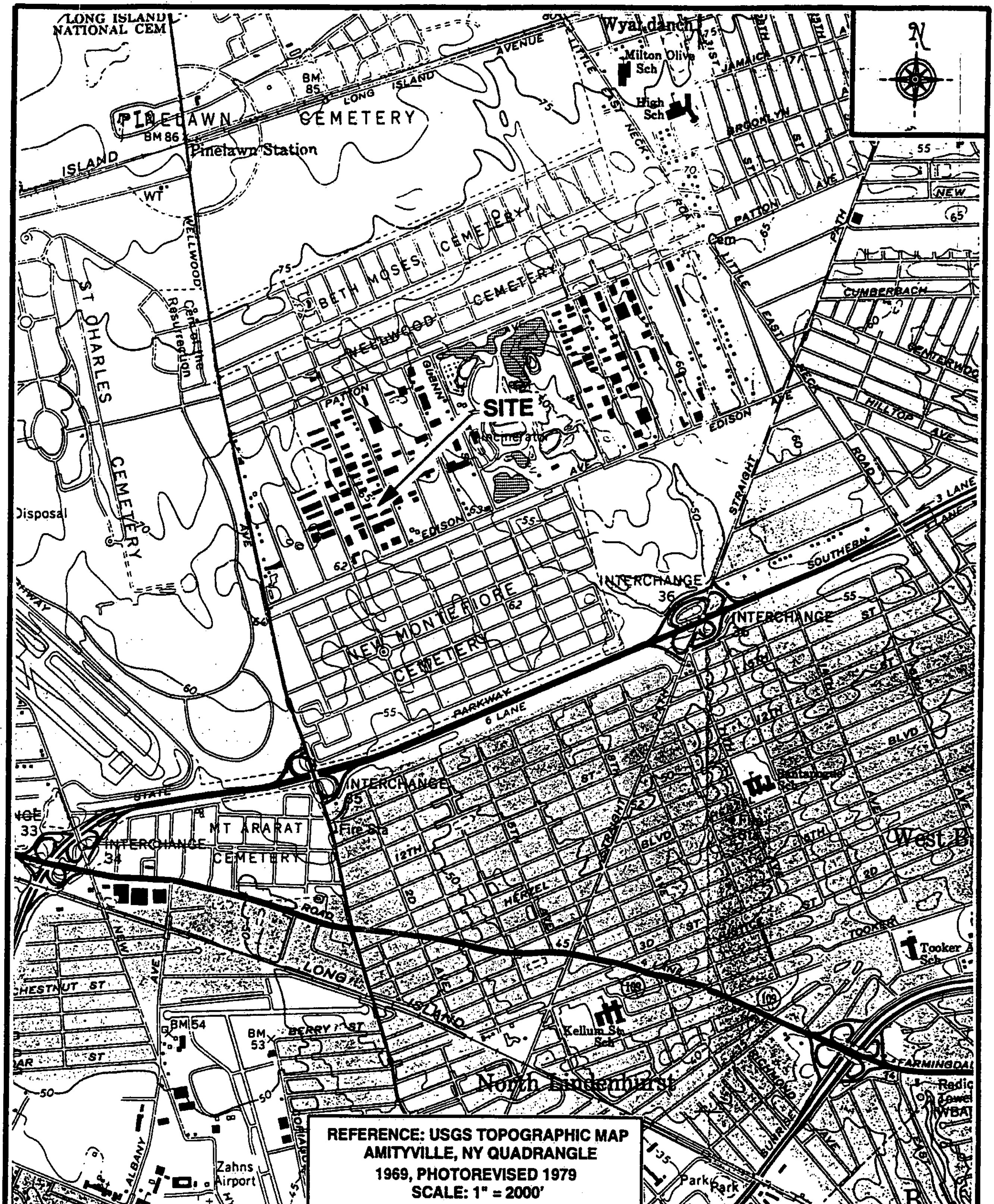
From 1970 to 1975, several site inspections were conducted by the Suffolk County Department of Health Services (SCDHS). The following observations/violations were noted during the SCDHS inspections:

- SFC was discharging industrial wastewater into stormwater drains.
- A collection sump inside the plant was overflowing out of the plant into storm drains. Water emanating from somewhere in the plant flowing towards the western storm drain. A green puddle was observed around the western storm drain.

Samples were also collected by SCDHS from the leaching tanks, the storm drains, and the site runoff. Elevated concentrations of heavy metals (iron, copper, cadmium, nickel, and chromium) were detected in the samples collected by the SCDHS. Copies of this data were not available for review. In 1975, NYSDEC issued an Order on Consent to SFC. The order stated that all outside tanks must be sealed to prevent any further leakage. It is not known if this Consent Order was signed by SFC.

Another Order of Consent filed by SCDHS and signed on 16 December 1981 stated the following terms and conditions:

- SFC to agree not to discharge any of its industrial waste on the ground, groundwaters, surface waters or subsurface waters without first obtaining a State Pollutant Discharge Elimination System (SPDES) permit.
- SFC will move all storage of toxic or hazardous materials from outdoors to a suitable location inside the SFC building unless SFC receives approval from the SCDHS for outdoor storage.



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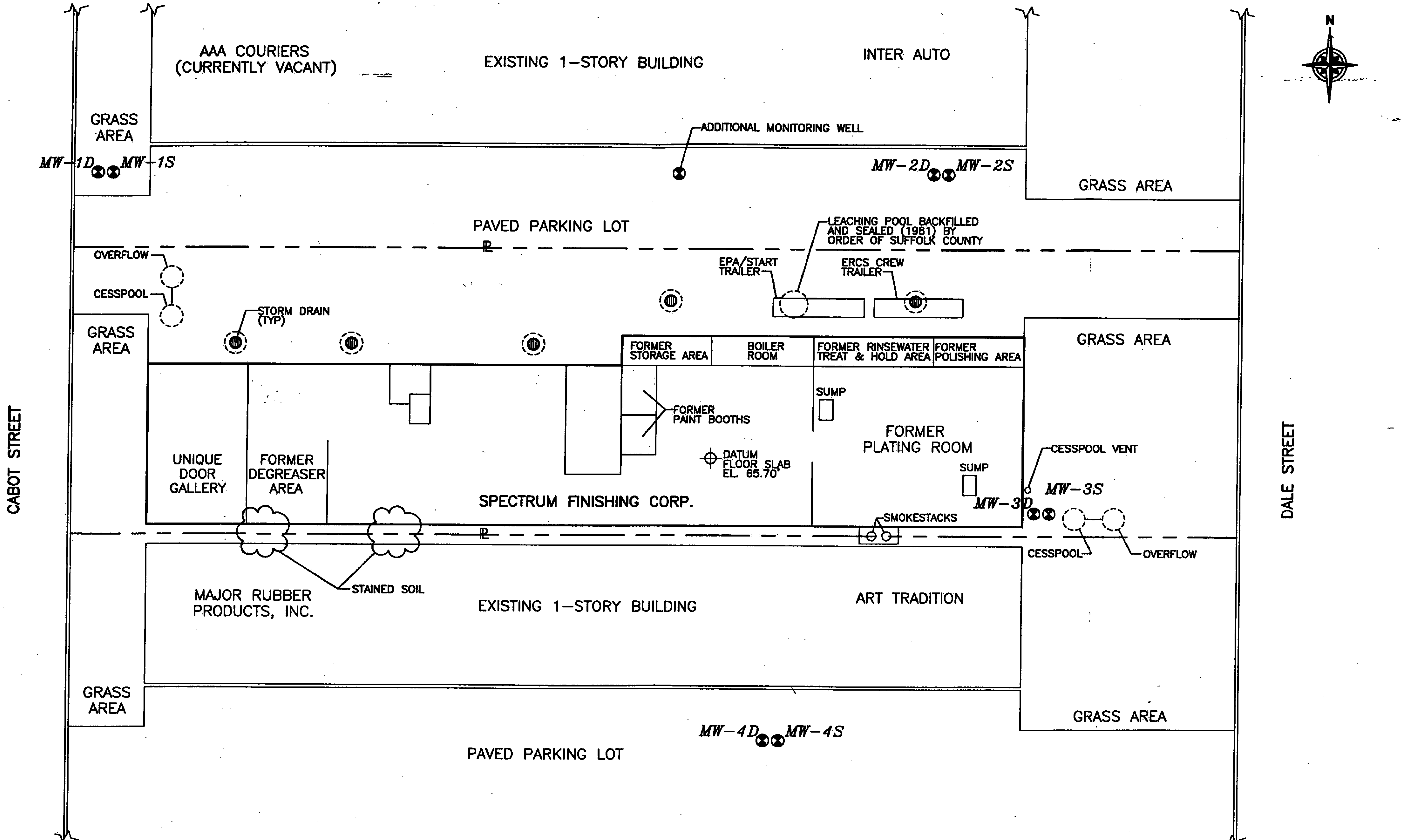
SITE LOCATION MAP

FIGURE 1

SPECTRUM FINISHING CORP.
50 DALE STREET
WEST BABYLON, NY



LEGEND

⊗ GROUND WATER MONITORING WELL

MW-4S MONITORING WELL NUMBER

SCALE: NONE

WESTON MANAGERS DESIGNERS/CONSULTANTS	PROJECT NAME: SPECTRUM FINISHING CORP. 50 DALE STREET WEST BABYLON, NY	SITE MAP
	CLIENT NAME: U.S. EPA	DATE: 12/17/97 FIGURE #: 2

WO #: 04200-022-081-0132-03 DATE: 12/17/97
FILE NAME: SPCTRUM2.DWG DRAWN BY: DP

- SFC to have cadmium-contaminated storm drain located approximately 10 feet northeast of the SFC garage door emptied of its liquid and solid contents through the services of licensed industrial waste scavenger.

Sometime between March 1982 and May 1982 a notice of formal hearing was issued by SCDHS. This issue stated the following:

- SFC discharged toxic or hazardous materials on 2 March 1982, 2 February 1982, and 27 January 1982 without a SPDES permit.

- SFC did not complete construction of a storage facility for toxic or hazardous materials by 3 March 1982, as required in the 1981 Consent Order.

- SFC did not move all storage of its toxic or hazardous materials indoors.

- SFC was discharging in excess of New York State Discharge Standards.

On 11 May 1982, following the notice of formal hearing, an administrative hearing was held by the SCDHS. The hearing recommended that SFC abandon the storm drain located approximately 15 feet northwest of the SFC garage by filling in the storm drain with clean soil to within approximately 6 feet so as to permit the installation of a non-porous, prefabricated, concrete holding tank, which will be piped to a pre-existing storm drain on the SFC property. It was also recommended that SFC install a solid, non-porous storm drain cover over the storm drain to prevent accidental or intentional discharges into the storm drain prior to its abandonment.

According to the SCF Phase II report, in 1983 SFC stopped discharging its wastewater to groundwater, in accordance with its former SPDES permit, by sealing the storm drains to prevent any further spills from discharging directly into them. The chemicals and the time period covered by the SPDES permit are not known. SFC began storing all of its plating rinse water and using a licensed hauler to transport it to an approved treatment, storage, and disposal (TSD) facility.

In June 1985, SFC constructed an indoor storage facility (containment system) for its hazardous/toxic substances, waste, and process solutions, in accordance with the Suffolk County Sanitary Code, Article 12-Construction of an Indoor-Outdoor Storage Facility for Hazardous/Toxic Materials. SFC submitted plans to construct a secondary containment system for its plating solutions, rinse water, wastes, and hazardous substances. SCDHS approved construction of the containment system (after a review of the engineering drawings) and the chemical resistance coating system that was to be applied to the floors and walls. The reinforced-concrete secondary containment system was then constructed. The containment system provided a capacity of 110 percent of the total tank volumes.

Woodward-Clyde Consultants, Inc. (WCC) completed a Phase I investigation of the SFC site. A final report from this investigation was completed on 20 September 1984 for the NYSDEC/Division of Solid Waste. As part of the Phase I report, a work plan was submitted to conduct a Phase II investigation. GRB Environmental Services, Inc. (GRB) performed a Phase II investigation of the SFC site on behalf of SFC from January to November 1987. The investigation included a geophysical survey, groundwater monitoring well installations, and soil and groundwater sample collection. According to NYSDEC, a Phase II draft report was completed; however, this report was not finalized because SFC subsequently filed for bankruptcy.

Eight monitoring wells were installed during the Phase II investigation. The monitoring wells were installed to establish groundwater quality, local stratigraphy, and groundwater flow direction in the upper water-bearing unit at the site. These wells consisted of four shallow monitoring wells installed to depths ranging from 24 to 25 feet below ground surface (bgs), and four deep monitoring wells installed at depths ranging from 49.3 to 50 feet bgs. One of the shallow wells and one of the deep wells were considered upgradient; the remaining monitoring wells were considered downgradient.

Additionally, a total of ten soil samples were collected from the monitoring well boreholes during the Phase II investigation: two soil samples, including one background sample, were collected from the ground surface; four subsurface soil samples collected from 20 to 22 feet bgs, and four subsurface soil samples were collected from 48 to 52 feet bgs.

Groundwater and soil samples were analyzed for selected metals and the following six volatile organic compounds (VOCs): 2-butanone; 1,1-dichloroethane; 1,1,1-trichloroethane; trichloroethylene; trans-1,2-dichloroethane; and toluene. Cadmium, lead, and nickel, which were not detected in the background subsurface soil sample collected from 20 to 22 feet bgs, were detected in the subsurface soil samples collected from 20 to 22 feet bgs in the downgradient boreholes. Chromium and copper were detected in the subsurface soil sample collected from 20 to 22 feet bgs at concentrations at least three times the background sample concentrations. Cadmium, copper, and zinc, which were not detected in the background subsurface soil sample from 48 to 52 feet bgs, were detected in the subsurface soil samples collected from 48 to 52 feet bgs in the downgradient boreholes. None of the six VOCs analyzed for were detected in the soil samples.

The following metals were detected in samples collected from shallow downgradient monitoring wells at concentrations at least three times the concentration of the shallow upgradient monitoring well or greater than the upgradient sample quantitation limit: cadmium, chromium, copper, iron, and nickel. The following metals were detected in samples collected from deep downgradient monitoring wells at concentrations at least three times the concentration of the deep upgradient monitoring well or greater than the upgradient sample quantitation limit:

cadmium, copper, lead, and zinc. Trichloroethane was also detected in groundwater samples collected from two downgradient deep monitoring wells at concentrations at least three times the concentration in the upgradient deep monitoring well.

Although the Phase II analytical data indicate a release of hazardous substances to groundwater, the data would be rejected or qualified as unusable if it were validated using U.S. EPA Region 2 Contract Laboratory Protocol (CLP) methods.

NYSDEC and the U.S. EPA visited the site in the spring of 1997 at the request of the SCDHS. According to NYSDEC and the U.S. EPA, there are numerous drums, open vats of dyes and electroplating liquids, bulk storage tanks, and gaylord boxes of sludge still stored inside the facility. The floor was covered with spilled material; upon subsequent testing, the spilled material was found to be either acidic or caustic. There are no materials stored outside of the building. NYSDEC and a U.S. EPA on-scene coordinator visited the site to determine if an emergency response removal action was necessary. NYSDEC and U.S. EPA met with the owner during the site visit. According to the U.S. EPA on-scene coordinator, the owner was trying to get all of the liquids out of the vats, boxes, and tanks into drums for disposal. However, the site owner could not fund the disposal. It was noted during the visit that the indoor sumps were filled and that liquid was pooled in areas on the cement floor. No material was observed flowing out of the facility

U.S. EPA obtained funding for a CERCLA removal action in August 1997. In October 1997, the site owner granted access to U.S. EPA to perform a removal action at the site. The U.S. EPA obtained site keys from the owner's attorney and conducted a walkthrough with the Emergency Response Cleanup Services (ERCS) contractor on 31 October 1997. Site activities commenced the week of 3 November 1997. U.S. EPA mobilized the ERCS contractor, Earth Tech Remediation Services, and WESTON Superfund Technical Assessment and Response Team (START). Command post trailers and utilities were set up, and 24-hour security was implemented.

U.S. EPA met with the site owner on 6 November 1997 and obtained approval to dispose of the debris to clear room to work in the building. Two 20-cubic-yard roll-off containers of debris were loaded out to the Alder Street Recycling Center in West Babylon, New York, on 7 November and 10 November 1997. Forty-five vats and 25 boxes containing electroplating chemicals were sampled and field screened. Seven partial vats were blended together following compatibility testing. Nine composite samples of the bulk waste streams were collected and shipped to an off-site lab for disposal analysis. A list of all waste sources found at the site is presented in Table 1.

Following remobilization at the site on 1 December 1997, approximately 423 containers, including nearly 300 drums, containing waste chemicals were sampled, field screened, and staged on-site. Three containers labeled as containing radioactive thorium-two jars containing liquid and one covered metal pail containing solid--were identified on-site. Treatment and disposal bids and waste profiles for the bulk solids were generated. Repackaging of the bulk solids from the existing boxes, which were no longer shippable, into new cubic yard shipping boxes, was initiated.

U.S. EPA obtained approval from the site owner to remove a portion of the retention wall around the waste water treatment system and to cut open the treatment tank to facilitate the removal of approximately 1,500 gallons of cyanide/metal sludge from the system. Approximately 100 gallons of waste were drained from the remaining process equipment.

According to a representative of WESTON START, which is overseeing removal efforts, the ERCS team demobilized on 19 December 1997 and remobilized on 12 January 1998 to resume removal efforts. The START representative said he anticipates removal efforts will be concluded in early March 1998.

NYSDEC intends to perform a full-scale remedial investigation/feasibility study at the site in early 1998. NYSDEC requested that WESTON notify him of any sampling plans, as NYSDEC would like to split samples.

WESTON ARCS conducted an on-site reconnaissance on 21 November 1997 to assess site conditions and identify possible sample locations. During the reconnaissance, WESTON personnel met with a member of the WESTON START team. One trailer for U.S. EPA and WESTON START personnel and another trailer for the ERCS team are currently located at the site, immediately north of the Spectrum building. WESTON ARCS personnel did not enter the Spectrum building during the on-site reconnaissance, but photos, a site map, and an inventory of vats located inside the building were supplied by WESTON START. At least five storm drains were observed on the north side of the Spectrum building. Most of the area surrounding the Spectrum building was paved, with the following exceptions:

- Small lawn areas near the streets on the eastern and western ends of the building;
- An unpaved approximately 6-foot wide alley between the Spectrum building and the building to the south; stained soil was observed at two locations along this alley;
- Some small "flower bed" areas (approximately 2-foot wide maximum) at the northern edge of the building, adjacent to paved areas.

The eight monitoring wells installed during the Phase II investigation were located during the on-site reconnaissance. One additional monitoring well was located in the parking lot north of the Spectrum building, approximately 50 feet west of the location of monitoring well MW-2. No residences, schools or daycare centers were located within 200 feet of the site.

Residents within 4 miles of the Spectrum Finishing Corporation site obtain potable water from several municipal water-supply systems. Approximately 2,310 people obtain drinking water from wells installed in the Upper Glacial Outwash Aquifer within a 4-mile radius of the site. Approximately 160,400 people obtain drinking water from wells installed in the Magothy Formation Aquifer within a 4-mile radius of the site. The nearest well (a municipal well) obtaining water from the Upper Glacial Outwash Aquifer is located 1.8 miles northeast of the site. The nearest well (a municipal well) obtaining water from the Magothy Formation Aquifer is located approximately 1.2 miles southeast from the site. The regional and local groundwater flow direction is toward the southeast.

No perennial surface water body is located within 2 miles of the site. The nearest surface water body is the Carlls River, located approximately 2.5 miles east of the site. Runoff from the SFC site is collected by the on-site stormwater drain system; storm drains are attached to "dry wells" that discharge directly into the ground. The SFC site is not located in a floodplain; therefore, a surface water migration pathway for the SFC site has not been evaluated.

Terrestrial sensitive environments and wetlands were not observed on-site during WESTON's on-site reconnaissance.

1.2 PREVIOUS WORK AT THE SITE

- GRB Environmental Services Inc. and R.D. Galli, P.C., Engineering Investigations at Inactive Hazardous Waste Sites in the State of New York, Phase II Investigation, West Babylon, Suffolk Co., New York, Draft Report, Spectrum Finishing Corporation Site, March 1988.

- Woodward-Clyde Consultant, Inc., Engineering Investigations at Inactive Hazardous Waste Sites in the State of New York, Phase I—Preliminary Investigation Final Report, Spectrum Finishing Corporation Site, 20 September 1984.

- NYSDEC, Finding of Fact Recommendation Decision and Order, 12 June 1982.

- NYSDEC, Notice of Formal Hearing, to SFC, 1982.

- NYSDEC, Order on Consent, No. IW 81-53, 1 December 1981.

- NYSDEC, Order on Consent, Albany, New York, May 1975.

- NYSDEC, Division of Hazardous Waste Remediation, Inactive Hazardous Waste Disposal Report (date unknown).

1.3 SCHEDULE

Sampling - Week of 6 April 1998
Analysis - Week of 13 April 1998 to week of 15 June 1998
Data Receipt - Week of 22 June 1998

SECTION 2.0

SAMPLE MANAGEMENT AND CONTROL

2.1 SAMPLE IDENTIFICATION SYSTEM

Each sample will be designated by a numeric code which will identify the site. The numeric code will be the task number specific for each site. Following the site code will be the medium type. A hyphen will separate the site code and medium type. Specific types are as follows:

SS - Surface Soil	SW - Surface Water
SB - Subsurface Soil	FB - Field Blank
GW- Groundwater	TB - Trip Blank

Following the medium type will be sequential sample numbers beginning with 01 and increasing accordingly. A duplicate sample will be identified in the same manner as other samples and will be distinguished in the field logbook.

2.2 SAMPLE BOTTLES

As of 1 September 1989 the CLP Sample Bottle Repository has been decentralized. Therefore this responsibility has fallen to the Regions and subsequently to WESTON. Sample bottles will be obtained from Recra Analytical, Inc., Lionville, Pennsylvania, and will meet all guidelines specified in OSWER Directive 9240.0-05, "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers (July 1989)".

2.3 SAMPLE PACKAGING AND SHIPPING

Samples will be packaged and shipped according to the U.S. EPA User's Guide to CLP (December 1988). Chain-of-Custody forms, sample labels, custody seals and other sample documents will be completed as specified in the above reference manual. All entries will be made in permanent ink. If errors are made when completing any of these forms, the error will be crossed out with a single line, initialed, and dated by the sampler. Each environmental sample will be properly identified and sealed in a polyethylene (PE) bag. The bag shall then be placed in a fiberboard cooler which has also been lined with a large PE bag. Samples shall be packed with sufficient ice (sealed in PE bags) to cool the samples to 4°C. Enough non-combustible adsorbent cushioning material shall be filled to minimize the possibility of container breakage. The large PE bag shall then be sealed and the container closed. Custody seals and strapping tape shall then be affixed. All samples will be shipped within 24 hours of collection via a common carrier. When sample shipments are to be transported, the U.S. EPA will be notified on that day or the following morning of the shipment, airbill number, and number and type of samples being shipped.

2.4 SAMPLE DOCUMENTATION

The sampling team or individual performing a particular sampling activity is required to maintain a field notebook. This field notebook will be a bound weatherproof logbook that shall be filled out at the location of sample collection immediately after sampling. It shall contain sample particulars including sample number, sample collection time, sample location, sample descriptions, sampling methods used, daily weather conditions, field measurements, name of sampler, and other site specific observations. It shall also contain any deviations from protocol. All entries will be made in permanent ink. If errors are made when completing this logbook, the error will be crossed out with a single line, initialed and dated by the sampler.

SECTION 3.0

SAMPLING STRATEGY AND PROCEDURES

3.1 SAMPLING STRATEGY

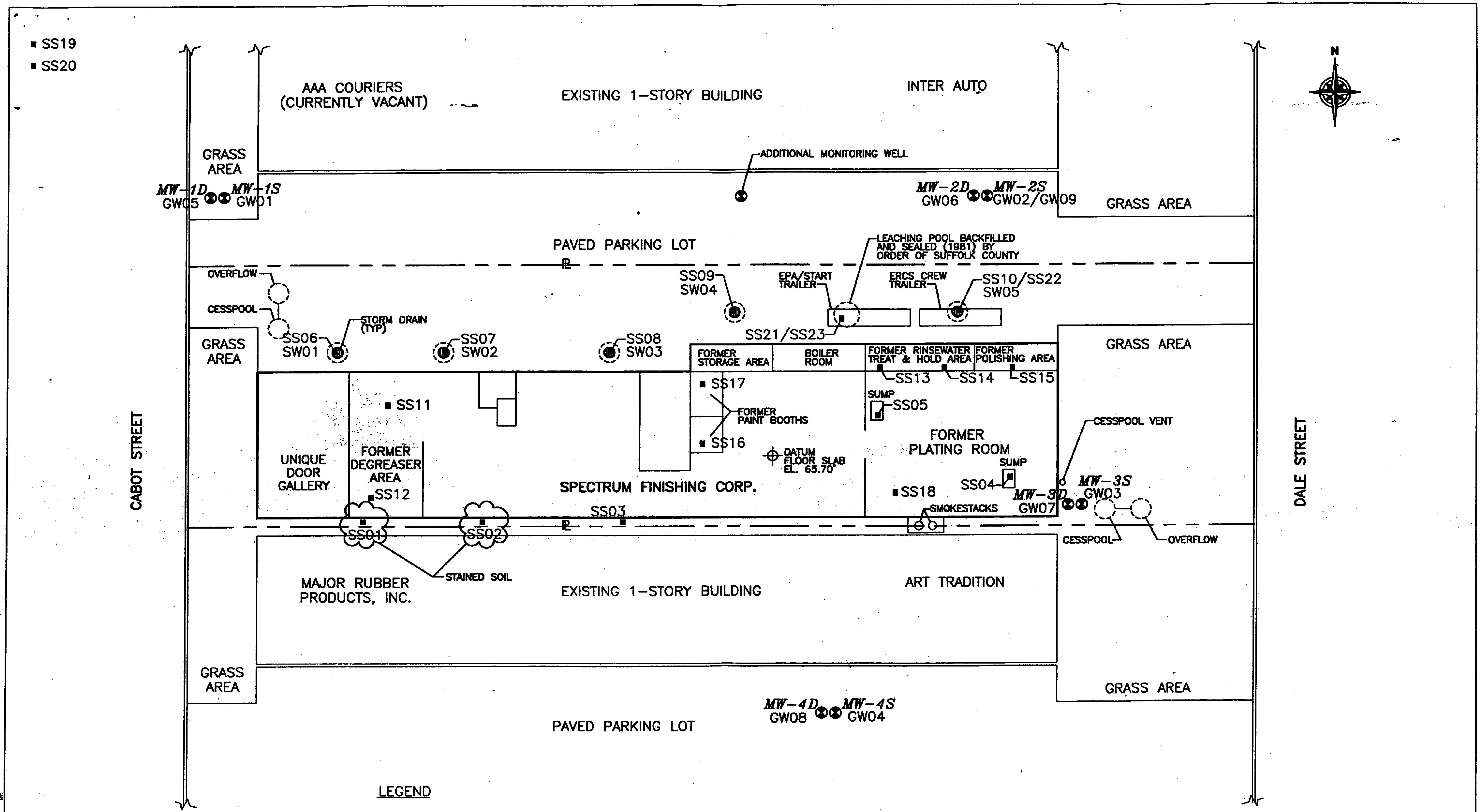
Figure 3 provides proposed sample locations. The following samples will be collected:

- 23 soil samples
- 9 groundwater samples
- 5 stormwater/runoff samples

A total of 23 soil samples (including two duplicates) are proposed for the Spectrum Finishing Corporation site. Three surface soil samples will be collected from the alley immediately south of the Spectrum building, including two samples collected from areas where stained soil was noted during the on-site reconnaissance. A soil sample will be collected from beneath each of the two sumps inside the building. Five samples will be collected from soil at the bottom of the storm drains in the parking lot north of the Spectrum building. A total of eight soil samples will be collected from soil immediately underneath the concrete floor inside the Spectrum building: two from the former degreaser area, two from former paint booths, two from the the former rinsewater treatment and holding area, one from the former polishing area, and one from the floor of the plating room. The actual locations of these samples will depend on conditions encountered inside the building. Two background soil samples (depth: 0 - 6 inches) will be collected from areas judged to be unaffected by on-site activities. One soil sample will be collected from approximately 5.5 feet below the ground surface in the area where a leaching pool was backfilled and sealed in 1981, as construction drawings show the leaching pools to be assembled from two precast 4-foot-6-inch-high drainage sections set approximately one foot bgs. Duplicate samples will be collected at two of the above locations for quality control purposes.

A total of nine groundwater samples (including one duplicate sample) will be collected from the eight existing on-site monitoring wells, which were installed as part of the Phase II investigation. The monitoring wells are arranged in couplets, with a shallow well (approximately 25 feet deep) and a deep well (approximately 50 feet deep) in each of four locations. The duplicate groundwater sample will be collected from one of the eight monitoring wells for quality control purposes.

A maximum of five stormwater/runoff samples will be collected from water pooled in the "dry wells" below the storm drains in the parking lot north of the Spectrum building.



LEGEND

■ SOIL SAMPLE

⊗ GROUND WATER MONITORING WELL

MW-4S MONITORING WELL NUMBER

GW04 GROUND WATER SAMPLE NUMBER (ALL SAMPLE NUMBERS ARE PRECEDED BY 22-0132-)

SCALE: NONE

WESTON MANAGERS DESIGNERS/CONSULTANTS

PROJECT NAME:	SPECTRUM FINISHING CORP. 50 DALE STREET WEST BABYLON, NY
CLIENT NAME:	U.S. EPA

PROPOSED SAMPLE LOCATION MAP

DATE: 12/17/97 FIGURE #: 3

WESTON MANAGERS DESIGNERS/CONSULTANTS

TABLE 3-1
SAMPLE DESCRIPTIONS

SAMPLE NUMBER	DESCRIPTION
22-0132-SS01	Grab; soil collected from stained soil area in alleyway south of Spectrum building adjacent to former degreaser area; to characterize waste source; Depth: 0-6 inches (Matrix spike/matrix spike duplicate).
22-0132-SS02	Grab; soil collected from stained soil area in alleyway south of Spectrum building; to characterize waste source; Depth: 0-6 inches.
22-0132-SS03	Grab; soil collected from alleyway adjacent to door south of Spectrum building; to characterize waste source; Depth: 0-6 inches.
22-0132-SS04	Grab; soil collected from beneath bottom of sump inside Spectrum building; to characterize waste source; Depth: 0-6 inches.
22-0132-SS05	Grab; soil collected from beneath bottom of sump inside Spectrum building; to characterize waste source; Depth: 0-6 inches.
22-0132-SS06	Grab; soil collected from bottom of western storm drain in parking lot north of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS07	Grab; soil collected from bottom of west-central storm drain in parking lot north of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS08	Grab; soil collected from bottom of central storm drain in parking lot north of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS09	Grab; soil collected from bottom of east-central storm drain in parking lot north of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS10	Grab; soil collected from bottom of eastern storm drain in parking lot north of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS11	Grab; soil collected under floor inside former degreaser area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS12	Grab; soil collected under floor inside former degreaser area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS13	Grab; soil collected under floor inside former rinsewater treatment and holding area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS14	Grab; soil collected under floor inside former rinsewater treatment and holding area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS15	Grab; soil collected under floor inside former polishing area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.

TABLE 3-1 (CONTINUED)
SAMPLE DESCRIPTIONS

SAMPLE NUMBER	DESCRIPTION
22-0132-SS16	Grab; soil collected under floor inside former paint booth area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS17	Grab; soil collected under floor inside former paint booth area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS18	Grab; soil collected under floor inside former plating room area of Spectrum building, to characterize waste source; Depth: 0 - 6 inches.
22-0132-SS19	Grab; soil collected from area not impacted by site activities, north of site on western side of Cabot Street; Background; Depth: 0 - 6 inches (Matrix spike/matrix spike duplicate).
22-0132-SS20	Grab; soil collected from area not impacted by site activities, north of site on western side of Cabot Street; Background; Depth: 0 - 6 inches.
22-0132-SS21	Grab; soil collected from approximately 5 ft below the ground surface in the area where a leaching pool was backfilled and sealed in 1981.
22-0132-SS22	Duplicate of 22-0132-SS10 for quality control.
22-0132-SS23	Duplicate of 22-0132-SS21 for quality control.
22-0132-SW01	Stormwater/runoff sample collected from water pooled in "dry well" below the western storm drain in parking lot north of Spectrum building.
22-0132-SW02	Stormwater/runoff sample collected from water pooled in "dry well" below the west-central storm drain in parking lot north of Spectrum building.
22-0132-SW03	Stormwater/runoff sample collected from water pooled in "dry well" below the central storm drain in parking lot north of Spectrum building.
22-0132-SW04	Stormwater/runoff sample collected from water pooled in "dry well" below the east-central storm drain in parking lot north of Spectrum building.
22-0132-SW05	Stormwater/runoff sample collected from water pooled in "dry well" below the eastern storm drain in parking lot north of Spectrum building.
22-0132-GW01	Groundwater sample collected from existing upgradient shallow monitoring well MW-1S (Matrix spike/matrix spike duplicate).
22-0132-GW02	Groundwater sample collected from existing sidegradient shallow monitoring well MW-2S.
22-0132-GW03	Groundwater sample collected from existing downgradient shallow monitoring well MW-3S.
22-0132-GW04	Groundwater sample collected from existing downgradient shallow monitoring well MW-4S.
22-0132-GW05	Groundwater sample collected from existing upgradient deep monitoring well MW-1D.

TABLE 3-1 (CONTINUED)
SAMPLE DESCRIPTIONS

SAMPLE NUMBER	DESCRIPTION
22-0132-GW06	Groundwater sample collected from existing sidegradient deep monitoring well MW-2D.
22-0132-GW07	Groundwater sample collected from existing downgradient deep monitoring well MW-3D.
22-0132-GW08	Groundwater sample collected from existing downgradient deep monitoring well MW-4D.
22-0132-GW09	Duplicate of 22-0132-GW02 for quality control.
22-0132-FB01	Field blank for quality control (bowl/trowel).
22-0132-FB02	Field blank for quality control (pump/bailer).
22-0132-FB03	Field blank for quality control (pump/bailer).
22-0132-FB04	Field blank for quality control (bowl/trowel).
22-0132-TB01	Trip blank for quality control.
22-0132-TB02	Trip blank for quality control.

TABLE 3-2
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-SS01	4x40 mL vials 2x8 oz jars 2x8 oz jars	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS02	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS03	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS04	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS05	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS06	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS07	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS08	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS09	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS10	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS11	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice

TABLE 3-2 (CONTINUED)
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-SS12	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS13	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics	Ice Ice Ice
22-0132-SS14	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS15	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS16	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS17	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS18	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS19	4x40 mL vials 2x8 oz jar 2x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS20	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS21	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SS22	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice

TABLE 3-2 (CONTINUED)
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-SS23	2x40 mL vials 1x8 oz jar 1x8 oz jar	VOCs Extractables Inorganics and cyanide	Ice Ice Ice
22-0132-SW01	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-SW02	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-SW03	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-SW04	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-SW05	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice

TABLE 3-2 (CONTINUED)
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-GW01	6x40 mL vials 12x1 L amber bottles 3x1 L polyethylene bottles 3x1 L polyethylene bottles	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH >12, Ice
22-0132-GW02	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW03	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW04	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW05	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW06	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice

TABLE 3-2 (CONTINUED)
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-GW07	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW08	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-GW09	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH < 2, Ice Ice HNO_3 to pH < 2, Ice NaOH to pH>12, Ice
22-0132-FB01	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH<2, Ice Ice HNO_3 to pH<2, Ice NaOH to pH>12, Ice
22-0132-FB02	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH<2, Ice Ice HNO_3 to pH<2, Ice NaOH to pH>12, Ice
22-0132-FB03	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH<2, Ice Ice HNO_3 to pH<2, Ice NaOH to pH>12, Ice

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TABLE 3-2 (CONTINUED)
SAMPLE ANALYSIS/BOTTLE TYPE/PRESERVATIONS

SAMPLE LOCATION	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
22-0132-FB04	2x40 mL vials 4x1 L amber bottles 1x1 L polyethylene bottle 1x1 L polyethylene bottle	VOCs Extractables Inorganics Cyanides	HCl to pH<2, Ice Ice HNO_3 to pH<2, Ice NaOH to pH>12, Ice
22-0132-TB01	2x40 mL vials	VOCs	HCl to pH <2, Ice
22-0132-TB02	2x40 mL vials	VOCs	HCl to pH <2, Ice

A description of all samples to be collected at the site is listed in Table 3-1. Samples collected at the Spectrum Finishing Corporation site will be analyzed for Target Compound List (TCL) and Target Analyte List (TAL) substances through the CLP, as well as for cyanides.

3.2 Sampling Procedures

Listed below are standard operating procedures (SOPs) for sampling that will be conducted at the Spectrum Finishing Corporation site. WESTON will collect a total of 35 samples, with all QA/QC and background samples incorporated into this total. Table 3-2 lists the samples to be collected, number of bottles for each sample, analysis to be performed and preservation methods.

3.2.1 Soil Sampling

1. Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new gloves prior to sampling at each location.

2. Use a decontaminated trowel and bowel.

3. Remove rocks, twigs, and other non-soil materials from the selected sampling location.

4. Using the trowel transfer the samples into a clean stainless steel pan. Take and record HNu and/or organic vapor analyzer (OVA) reading. Repeat steps 3 and 4 at an adjacent location until enough soil is collected to fill required containers.

5. Fill the volatile sample bottles immediately so as to not compromise sample integrity.

6. Homogenize soil for non-volatile samples in the pan using the decontaminated stainless steel utensil and transfer the samples into required containers. Homogenization shall be completed as per the following procedure:

   After collection of the volatile sample(s), the soil in the stainless steel pan will be scraped from the sides, corners and bottom of the pan, rolled to the sides, corners and bottom of the pan, rolled to the middle of the pan, and initially mixed. The soil will then be quartered and moved to the four corners of the pan. Each quarter will then be mixed individually, and when completed be rolled to the center of the pan and mixed once again.

7. Place analytical samples in cooler and chill with ice. Samples will be shipped within 24 hours to the designated laboratory.

8. Fill out field notebook, custody seals, labels, and chain-of-custody forms.

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3.2.2 Groundwater Sampling

The following procedures apply to the collection of groundwater samples from site monitoring wells using a submersible pump and disposable teflon tubing.

1. Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer sampling gloves prior to sampling at each new location.

2. Lay polyethylene sheeting around the well to prvent contamination of the pump.

3. Open monitoring well and collect and record a headspace reading using the OVM.

4. Determine the depth to groundwater using a water level indicator, and determine the volume of water to be purged from the well (a minimum of three well volumes will be purged from the monitoring well prior to sampling).

5. Slowly lower the pump into the well until it is completely submerged.

6. Begin pumping well. Monitor and record water level. From the initial discharge, record pH, temperature and conductivity. Thereafter, record pH, temperature and conductivity after each well volume removed from the well. Repeat until the required purge volume is achieved.

7. Allow groundwater level to recover at least 90 percent prior to collecting samples.

8. To collect sample, turn on pump, maintain discharge at low rate.

9. The sampling and preservation procedure shall be:

   a) VOAs - Determine the amount of 1:1 HCl preservative required to adjust the pH of the sample to less than 2 in an extra 40 mL glass vial. If effervescence occurs when the bottle is tapped, volativle samples will be submitted without preservative and noted on the respective Traffic Report. Add this volume of HCl to the empty 40 mL glass vials prior to sampling. Fill each 40 mL container with sample directly from the bailer to just overflowing so that no air bubbles are entrapped inside.

   b) Other parameters - Fill each container and preserve immediately. To test for pH, pour a minimal portion of sample onto broad range pH paper to verify if the appropriate pH level has been obtained.

10. Place analytical samples in cooler and chill with ice. Samples will be shipped within 24 hours to the designated laboratory.

11. Fill out field notebook, custody seals, labels and chain of custody forms.

If samples cannot be collected using submersible pumps (for instance, if the pumps clog because of silting), wells will be bailed using reusable Teflon bailers.

3.2.3 Stormwater/Runoff Sampling

The following procedure will apply to the collection of surface water:

1. Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new sampling gloves prior to sampling at each new location.

2. The following equipment will be used to collect samples:

    a) sample containers

    b) a decontaminated stainless steel or Teflon scoop (if necessary)

    c) a decontaminated glass or stainless steel beaker clamped to a sampling pole (if necessary)

3. Measure and record temperature, pH, dissolved oxygen, and specific conductance.

4. Surface water samples shall be collected prior to sediment samples, with downstream samples preceding upstream samples. Aqueous samples shall be collected by submerging the bottle, scoop or beaker. Care will be exercised when using a beaker or scoop to pour water in the sample bottles. Samples for volatile organic analysis (VOA) will be collected from the first beaker or scoop.

5. The preservation procedure shall be:

    a) VOAs - Determine the amount of 1:1 HCl preservative required to adjust the pH of the sample to less than 2 in an extra 40 ml glass vial. If effervescence occurs when the bottle is tapped, volatile samples will be submitted without preservative and noted on the respective Traffic Report. Add this volume of HCl to the empty 40 mL glass vials prior to sampling. Fill each container with sample to just overflowing so that no air bubbles are entrapped inside.

    b) Other Parameters - Fill each container and preserve immediately. To test for pH, pour a minimal portion of sample onto broad range pH paper to verify if the appropriate pH level has been obtained.

6) Place analytical samples in cooler and chill with ice. Samples will be shipped to the designated CLP laboratory within 24 hours.

7) Fill out field notebook, sample log sheet, labels, custody seals and Chain-of-Custody forms.

3.3 DECONTAMINATION

As detailed in the previous sections, all equipment involved in field sampling activities will be decontaminated prior to and subsequent to sampling. Decontamination of sampling equipment will be kept to a minimum in the field and whenever possible dedicated sampling equipment will be used. Decontamination of sampling equipment including scoops/trowels and bowls will be conducted as follows:

1) Alconox detergent and potable water scrub

2) Potable water rinse

3) A 10% nitric acid rinse (ultra pure grade) when sampling for inorganics.

4) Distilled or potable water rinse.

5) Acetone rinse.

6) Air dry.

7) Deionized water rinse.

8) Air dry (sufficient time will be allowed for the equipment to completely dry).

9) Wrap or cover exposed ends of sampling equipment with aluminum foil (shiny side out) for transport and handling.

SECTION 4.0

QUALITY ASSURANCE/QUALITY CONTROL

This section details the Quality Assurance/Quality Control (QA/QC) sample requirements for all field activities performed during the sampling effort.

4.1 FIELD INSTRUMENT CALIBRATION AND PREVENTIVE MAINTENANCE

The sampling team is responsible for assuring that a master calibration/maintenance log will be maintained for each measuring device calibrated in the field. This log will be maintained in the field logbook. Each log will include at a minimum where applicable:

- name of device and/or instrument calibrated
- device/instrument serial/ID number
- frequency of calibration
- date of calibration
- results of calibration
- name of person performing the calibration
- identification of the calibration gas (HNu, OVA)
- buffer solutions (pH meter only)

Equipment to be used each day shall be calibrated prior to the commencement of the days activities.

4.2 QA/QC SAMPLE COLLECTION

4.2.1 Trip Blanks

On events of aqueous volatile sampling, a trip blank is to be collected. A trip blank is an aliquot of deionized, demonstrated analyte-free water which is sealed in 40 mL glass vials with teflon-lined septum caps prior to the initiation of field work. This blank is applied in sample data validation to determine if any cross contamination has occurred between samples during shipment. These sealed bottles will be placed in a fiberboard cooler after filling and accompany field personnel to the sampling locations.

Trip blanks will be collected in accordance with the procedures listed below.

1. Pour deionized water into an extra vial. Determine the amount of 1:1 hydrochloric acid (HCl) dropwise to lower sample pH to less than 2, verifying with broad range pH paper. Fill the two sample vials required with predetermined volume of HCl.

2. Proceed to fill the two vials just to overflowing and seal so that no air bubbles are entrapped inside. Place in sample cooler.

3. Complete sample log, labels, custody seals, and Chain-of-Custody forms. Record in field notebook.

4.2.2 Field Blanks

A field blank will consist of pouring deionized, demonstrated analyte-free water over decontaminated sampling equipment to evaluate potential cross-contamination from inadequate decontamination. The frequency of field blank collection is one per decontamination event per type of equipment, not to exceed more than one per day. For the purposes of an SIP, field blank collection will not exceed a total of three samples. Blank will be taken at the beginning of each day for all parameters of interest (excluding physical parameters) and shipped with the samples taken subsequently that day. For the Spectrum Finishing Corporation sampling event; a bowl/trowel field blank will be collected.

Field blanks will be collected in accordance with the procedure listed below:

1. Decontaminate sampling device using the procedure specified in Section 3.2 of this field sampling plan.

2. Pour deionized water over the sampling device and collect the rinsate in the appropriate sample containers. VOA vials are filled and preserved in the same manner as trip blank vials.

3. Preserve remaining samples as specified in Table 3-2 of this plan. Test pH by pouring a small portion of sample on broad range pH paper over a collection bowl. Place in sample cooler.

4. Complete labels, custody seals and chain of custody forms. Record in field notebook.

4.2.3 Deionized Water Blanks

The deionized (DI) water utilized for the trip and field blanks will be certified as such. A copy of this certificate will be kept on site and another in the site-specific project file. The criteria to be demonstrated as analyte-free will be consistent with that specified in the U.S. EPA Region II Quality Assurance Manual (October 1989), and is as follows:

Purgeable organics	< 10 ppb
Semivolatile organics	< CRQL

Pesticides/PCBs	< CRQL
Inorganics	< CRDL

The CRQL is represented by the Contract Required Quantitation Limit and the CRDL is represented by the Contract Required Detection Limit in the most recent CLP Statement of Work. For specific common laboratory contaminants such as methylene chloride, acetone, toluene, 2-butanone, and phthalates, the allowable limits are three times the respective CRQLs.

Data generated as a result of this analysis will be incorporated into the SIP report for the site. Additionally, a copy of each DI water analysis will be maintained in the Spectrum Finishing Corp. project file.

4.2.4 <u>Duplicate Samples</u>

Duplicate samples will be sent for laboratory analysis to evaluate the reproducibility of the sampling technique used. At a minimum, a rate of one duplicate in twenty samples will be obtained for each matrix. Soil and sediment matrices, for the purpose of the SIP project, are considered to be the same matrix. The matrix spike/matrix spike duplicate (MS/MSD) for aqueous samples will require the collection of triple sample volume. The MS/MSD for the soil matrix requires double sample volume.

4.2.5 <u>Split Samples</u>

Splitting of samples in the instance of a SIP would be performed when the site owner/operator wishes to ensure the sample results generated by WESTON are accurate. WESTON is not responsible for obtaining the desired amount of sample containers for the site owner/operator. It is not necessary to assess the site owner/operator laboratory performance or laboratory methods used, although these methods should be of equivalent performance. The site owner/operator will be informed that split samples are to be analyzed at their own expense. Documentation of split samples will be shown on the Traffic Report.

Soil and sediment samples obtained for volatile analysis may not be split. In this instance, samples must be collected as collocated grabs. Furthermore, it may be necessary to collocate or depth-integrate collection so sufficient sample volume is obtained. When splitting aqueous samples, homogenization of the sample is only necessary if heterogeneity is suspected (i.e., leachate).

4.2.6 <u>Background Samples</u>

In order to accurately assess any potential contamination on the site owner/operator property, at least one background sample for each pathway matrix of concern will be collected. The analysis of each sample will be equal to those specified for the environmental samples.

4.2.7 Data Validation

WESTON personnel, trained and approved by U.S. EPA Region II Monitoring Management Branch, will perform all data validation utilizing the most current U.S. EPA Region II Data Validation guidelines.

SECTION 5.0

FIELD CHANGES AND CORRECTIVE ACTIONS

The SIP Task Manager (TM) or designee is responsible for all SIP activities. The TM may be required to modify generic site procedures to accommodate site-specific needs or unforeseeable events. In the event is becomes necessary to modify a procedure, the TM will notify the U.S. EPA Region II Work Assessment Manager (WAM) with copies of correspondence sent to the U.S. EPA Region II Project Officer (PO) and Contracting Officer (CO). Alterations in the TWP are to be documented in the field logbook which is signed by the initiator and the TM.